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The Consequence Argument and the Definition of Determinism

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Resumo

Peter van Inwagen no seu *An Essay of Free Will* e, no muito mais tarde, "The Consequence Argument" formula várias versões daquilo que designou por "o argumento de consequência". van Inwagen descreveu o "argumento da consequência" como um argumento para a incompatibilidade do determinismo com o livre arbítrio. Contudo, o autor deste artigo argumenta que a mais recente formulação do argumento da consequência não é, tal como está, um argumento para a incompatibilidade do determinismo com o livre arbítrio. Embora possa ser transformado em um, não parece haver nenhuma maneira simples de transformá-lo em um argumento convincente para a incompatibilidade do determinismo com o livre arbítrio (ou mesmo, para a incompatibilidade do determinismo com o livre arbítrio humano). Por isso, sugere-se, para a construção de um argumento convincente para a incompatibilidade do determinismo com o livre-arbítrio, que a melhor aposta passa pela reconstrução de uma definição do determinismo substancialmente diferente da de van Inwagen.

Palavras-chave : argumento da consequência, determinismo, livre arbítrio, metafísica, van Inwagen

Abstract

In *An Essay on Free Will*, and in the much later "The Consequence Argument" Peter van Inwagen formulated various versions of what he calls "the consequence argument". van Inwagen has described the consequence argument as an argument for the incompatibility of determinism with free will. But, I argue, the latest formulation of the consequence argument is not, as it stands, an argument for the incompatibility of determinism with free will. Although it can be turned into one, there does not seem to be any straightforward way of turning it into a cogent argument for the incompatibility of determinism with free will (or even, for the incompatibility of determinism with human free will). I suggest that if we want to construct a cogent argument for the incompatibility of determinism with free will, our best bet is to start with a definition of determinism substantially different from van Inwagen's.

Keywords : consequence argument, determinism, free will, metaphysics, van Inwagen

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In *An Essay On Free Will*, Peter van Inwagen sets out the following argument:

> If determinism is true, then our acts are the consequences of the laws of nature and events in the remote past. But it is not up to us what went on before we were born, and neither is it up to us what the laws of nature are. Therefore, the consequences of these things (including our present acts) are not up to us.[1]

As van Inwagen says, this formulation of (what he calls) the consequence argument is not as careful and detailed as the three that follow it (in *An Essay On Free Will*). In "The Consequence Argument", van Inwagen offers a fourth formulation of the argument, which turns on the notion of *untouchability*. For van Inwagen,

> An untouchable proposition is a true proposition that is such that nothing that anyone is or ever has been able to do might have had the consequence that it is false.[2]

As van Inwagen sees it, the following principles are necessary truths about untouchability:

(α) If *P* is a necessary truth, then *P* is untouchable.

and

(β) If both *P* and *if P then Q* are untouchable, so too is *Q*.

Also, as van Inwagen sees it,

(γ) Determinism logically implies that if *P* is any true proposition, the (whole) truth about the (intrinsic) state of the universe at some arbitrary moment of the (remote) past, together with the (whole) truth about the laws of nature, logically implies *P*.

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1. VAN INWAGEN, Peter – *An Essay on Free Will*. Oxford: Clarendon Press, 1983, pp. 16 and 56.

2. "The Consequence Argument". In: VAN INWAGEN, P. & ZIMMERMAN, D. – *Metaphysics: The Big Questions*, 2nd edition, Oxford: Blackwell, 2008 (e-accessible on <URL: http://www.andrewmbailey.com/pvi/>), p. 4.

Given (α) – (γ), van Inwagen argues, we may move from the premiss that determinism is true to the conclusion that there is no free will. van Inwagen's path from the premiss to the conclusion is (essentially) the following:

(1) Suppose that determinism is true. Then, by (γ), we may conclude that, where P_0 is a (true) proposition (simply) specifying the complete (intrinsic) state of the universe at some arbitrary moment of the (remote) past, and *L* is the conjunction into a single proposition of all the laws of nature, and *P* is an arbitrary truth, *if* P_0 *and L, then P* is a necessary truth. Hence (by elementary logic) *if* P_0, *then: if L then P* is a necessary truth.

(2) By (α), all necessary truths are untouchable truths.

(3) So *if* P_0, *then: if L, then P* is an untouchable truth.

(4) In which case, by (β), if P_0 is untouchable, then so is the conditional, *if L, then P*. (β) says that if both the antecedent of a conditional and the conditional itself are untouchable, so too is the consequent of that conditional. (3) says that a certain conditional (*if* P_0, *then if L, then P*) is untouchable. So, given (β) assuming that the antecedent of that conditional (P_0) is untouchable, so too is its consequent (*if L, then P*).

(5) Moreover, P_0 is in fact untouchable.

(6) Hence the conditional, *if L, then P* is untouchable.

(7) So, (by (β) again), if *L* is untouchable, so is *P*.

(8) Moreover, *L* is in fact untouchable.

(9) So *P* is untouchable.

(10) From (1) – (9), we know that if determinism is true, then every truth is untouchable. And if every truth is untouchable, then there is no such thing as free will. Whence we may conclude that if determinism is true, then there is no such thing as free will.

This argument is (manifestly) an argument for the (truth of the) conditional, *if determinism is true, then there is no such thing as free will.* van Inwagen also thinks of it as an argument for incompatibilism – that is, as an argument for the denial that "free will and determinism can co-exist".[3]

3. *Ibidem*, p. 13.

It is not immediately evident, though, that the above argument is (as it stands) an argument for incompatibilism (as van Inwagen understands it). For that argument only gets from determinism to the non-existence of free will via $(\alpha) - (\gamma)$, the (current) untouchability of the intrinsic character of the universe at some time the (remote) past, and the untouchability of the laws of nature. Hence that argument seems not to rule out the possibility that determinism (in and of itself) is compatible with the existence of free will, even though the conjunction of determinism with $(\alpha) - (\gamma)$, the untouchability of the intrinsic character of the universe at some time in the (remote) past, and the untouchability of the laws of natures is not compatible with the existence of free will.

Of course, if determinism, $(\alpha) - (\gamma)$, the untouchability of the intrinsic character of the universe at some time in the (remote) past, and the untouchability of the laws of nature are jointly incompatible with free will, but determinism itself is compatible with free will, then at least one of $(\alpha) - (\gamma)$, the untouchability of the intrinsic character of the universe at some time in the (remote) past, and the untouchability of the laws of nature is at most contingently true (given that, whenever *P* and *Q* are jointly incompatible with *R*, and *Q* is a necessary truth, *P* is incompatible with *R*).

And who would think that at least one of $(\alpha) - (\gamma)$, the untouchability of the intrinsic character of the universe at some time in the (remote) past, and the untouchability of the laws of nature is at most contingently true? On the face of it, anyone who thinks that, whether or not it's in fact true that God (as usually conceived) exists, it might have been true. Theists typically hold that *ante omnia saecula* God chose the laws of nature. For instance, (ignoring relativistic complications) He decided, say, that the gravitational force between bodies with masses m_1 and m_2 would be equal to Gm_1m_2 / r^2 (where *G* is the gravitational constant, and *r* is the distance between the centers of mass of m_1 and m_2). He might instead have decided that it would be $G'm_1m_2 / r^2$, for some G' not equal to *G*. In that case, there would have been a different law of universal gravitation, and the actual law of universal gravitation would have been false; accordingly the proposition *L* (a conjunction one of whose conjuncts is the law of universal gravitation) would have been false. So, theists hold, there is something that someone (or Someone) was able to do which would have had, and *a fortiori* might have had, the consequence that *L* was false. In other words, *L* is not an untouchable truth. Whether or not theists are right to think that God *ante omnia saecula* had a choice about the laws of nature, as long as there might have been a God who (*ante omnia saecula*) had a choice

about the laws of nature, it is at most contingently true that the laws of nature (and L) are untouchable.

Although I shall for the most part set issues concerning the untouchability of the past to one side, it may be worth pointing out that, as long as there might have been a (traditionally conceived) God who antedated the universe, it will be at most contingently true that the intrinsic character of the universe at some past time (however remote) is untouchable. Where t is any past time in the history of the universe, and P_t is a (true) proposition that (simply) specifies the complete (intrinsic) state of the universe at t, a (traditionally conceived) God who existed before the universe did would (at some time prior to the existence of the universe) have had the ability to do something which would (and *a fortiori* might) have had the consequence that P_t was false. A (traditionally conceived) God would have that ability, even if He didn't antedate the universe (inasmuch as both He and the universe had an infinite past), since it would still be true that, for any time past time t, and true proposition P_t (simply) specifying the complete (intrinsic) state of the universe at t, (at some time before t) God had the ability to do something that would and *a fortiori* might have had as a consequence the falsity of P_t.

In fact, though, it seems that we cannot establish that either the untouchability of the intrinsic character of the universe at some time in the (remote) past or the untouchability of the laws is at most a contingent truth, simply by appeal to the possibility of (a traditional) God. It is true that in his "official definition" of untouchability already cited, van Inwagen says that

> An untouchable proposition is a true proposition that is such that nothing that anyone is or ever has been able to do might have had the consequence that it is false.

But at an earlier point in the article, he introduces the notion of untouchability as follows:

> Some truths, however, are not up to anyone (to any human being). For example: that human beings exist, that the earth has a large moon, that the presence of mass changes the local curvature of spacetime, that there is no largest prime number. Let us call a true proposition whose truth is up to no one (to no human being, past, present, or future) an untouchable proposition.[4]

4. *Ibidem*, p. 3.

So van Inwagen holds that an untouchable proposition is a true proposition such that nothing that any *human being* is or ever has been (or ever will be) able to do might have had (or might have) the consequence that it is is false. (For this reason, van Inwagen considers it obvious that truths about the pre-human past are untouchable,[5] and says that the laws of nature are untouchable truths, inasmuch as "*as far as human beings (at any rate) are concerned*, the laws of nature are just there"[6]).

Let us say that a true proposition such that nothing that any human being is or ever has been (or ever will be) able to do might have had (or might have) the consequence that it is false, a *humanly untouchable* proposition. ("Humanly untouchable" is modeled on the more familiar "humanly impossible" (i.e. not humanly possible).) Let us call a true proposition such that nothing that a divine being is or ever was (or ever will be) able to do might have had (or might have) the consequence that it is false, a *divinely untouchable* proposition. (*Something exists or something existed* would presumably be a divinely untouchable proposition). Finally, let us call a true proposition such that nothing *anyone* (human, divine….) is or ever has been (or ever will be) able to do might have had (or might have) the consequence that it is false an *absolutely untouchable* proposition. (*Something exists or something existed* would presumably be absolutely as well as divinely untouchable).

Now it seems that, on the assumption that there is, or at any rate there might have been (a traditional) God, the divine and absolute untouchability of the (intrinsic) character of the universe at some time in its (remote) past, and the divine and the absolute untouchability of the laws of nature, are at most contingently true. But, it might be maintained, this is perfectly compatible with the *human* untouchability of the intrinsic character of the universe at some time in its (remote) past and the *human* untouchability of the laws being necessary truths; and, whatever a less than careful reader might think, what van Inwagen means by "the untouchability of the intrinsic character of the universe in the (remote) past and of the laws" is the human (rather than the absolute) untouchability of the intrinsic character of the universe in the (remote) past and of the laws.

Let us return to the overall structure of the new formulation of the consequence argument. It involves moving from (a) *determinism is true* to (b) *every truth is untouchable* and thence to (c) *there is no such thing as free will*. If by "untouchability" van Inwagen meant what I have called absolute

5. *Ibidem*, p. 9
6. *Ibidem*, p. 11 (my emphasis on "for human beings, at any rate").

untouchability, then the passage from (b) to (c) would on the face of it be straightforward. But when van Inwagen says that "if every true proposition is an untouchable truth, then free will simply does not exist" (p. 13), what he appears to mean is that if every true proposition is a humanly untouchable truth, then free will simply does not exist. And why should the fact that every true proposition is humanly untouchable imply that angelic or divine free will does not exist (unless of course human untouchability implies absolute and thus angelic and divine untouchability, which would take us back to our original (theological) worry about whether premiss (8) of our argument is at most contingently true)?

This difficulty is obviated, if we suppose that, in much the way that untouchability, as van Inwagen understands it in the argument, is human untouchability, free will, as van Inwagen understands it in the argument, is human free will. On this construal, our argument is (as it stands) an argument for the incompatibility of determinism and certain additional premisses with the existence of human free will. Assuming that not just (α) – (γ), but also the (human) untouchability of the intrinsic character of the universe at some time in the (remote) past and the (human) untouchability of the laws of nature, are necessary truths, our argument can easily enough be turned into what van Inwagen (more or less) describes it as—to wit, an argument for the incompatibility of determinism with (human) free will (by opportunely replacing premisses such as (5) and (8) with their necessitations). (For brevity, I shall call this last argument *the modified consequence argument, or the modified argument*).

But it looks as though the modified argument won't work. As we have seen, van Inwagen says that

> An untouchable proposition is a true proposition that is such that nothing that anyone is or ever has been able to do might have had the consequence that it is false.

– where "anyone" should be understood as "any human being." If an untouchable proposition is (*per definitionem)* a true proposition satisfying a certain additional condition, then untouchability implies truth. If untouchability implies truth, then necessary untouchability implies necessary truth. So suppose we modify van Inwagen's 2008 formulation of the consequence argument by (*inter alia*) replacing premiss (8) with its necessitation. The necessitated version of premiss (8) will imply that *L* is a necessary truth. Surely, though, necessary truth implies not just human, but also divine and absolute untouchability: if *P* is necessarily true, there is nothing that a human being, or an angel, or God Himself could do that

might have as a consequence the falsity of *P*. So the envisaged modification of the 2008 version of the consequence argument does not after all give us an argument for the incompatibility of determinism with human free will that allows for the compatibility of determinism with divine free will; it gives us an argument for the incompatibility of determinism with free will (as such).

Suppose, though, we say that a proposition *P* is *humanly touchable* if and only if something that some human being was or is (or will be) able to do might have had (or might have) the consequence that *P* is false. And suppose we think that the following is a necessary truth:

> If *P* is a humanly touchable true proposition, and $Q_1 \ldots Q_n$ are true propositions that jointly imply *P*, at least one of $Q_1 \ldots Q_n$ is humanly touchable. (Equivalently: if *P* is a humanly touchable true proposition, and $Q_1 \ldots Q_n$ are true propositions that jointly imply *P*, then not all of $Q_1 \ldots Q_n$ are humanly untouchable.)

(For readers who prefer formulations less freighted with *P*'s and *Q*'s, what this principle says is that no humanly touchable truth is ("singly") implied by any humanly untouchable truth, and no humanly touchable truth is jointly implied by any truths all of which are humanly untouchable. In other words, what the principle says is that humanly touchable truths do not follow from humanly untouchable truths (from truths all of which are humanly untouchable).

Given (the necessitation of) our principle, we could modify the 2008 version of the consequence argument along something like the following lines:

(1′) Necessarily, if determinism is true, then if *P* is an arbitrarily chosen true proposition, there is a pair of propositions P_0 and *L* which satisfy the following conditions: (a) P_0 is a (true) proposition (simply) specifying the complete (intrinsic) state of the universe at some arbitrary moment the (remote) past, and *L* is a (true) proposition which is the conjunction into a single proposition of all the laws of nature, and (b) P_0 and *L* jointly imply *P*. In other words, necessarily, if determinism is true, any truth is (jointly) implied by a true "maxi-specification" of the intrinsic character of the universe at some time in the (remote) past and a true "maxi-law" of nature.

(2′) Necessarily, no maxi-specification of the intrinsic character of the universe at some time in the (remote) past is a humanly touchable truth.

(3′) Necessarily, no maxi-law of nature is a humanly touchable truth.

(4′) Necessarily, if *P* is a humanly touchable truth, then *P* does not follow from any truths all of which are humanly untouchable (equivalently, from any truths none of which are humanly touchable). (This is just the necessitation of the principle set out above).

(5′) Necessarily, if *P* is a humanly touchable truth, then *P* does not follow from any pair of true propositions, one of which is a maxi-specification of the intrinsic character of the universe at some time in the (remote) past, and one of which is a maxi-law of nature. (5′) follows straightforwardly from (2′) – (4′).)

(6') But necessarily, if determinism is true, every true proposition follows from some pair of true propositions, one of which is a maxi-specification of the intrinsic character of the universe at some time in the (remote) past, and one of which is a maxi-law of nature (see premiss (1′)).

(7′) So necessarily, if determinism is true, there are no humanly touchable truths (from (5′) and (6′)).

(8') Necessarily, if there are no humanly touchable truths, then there is no such thing as human free will.

(9′) So necessarily, if determinism is true, then there is no such thing as human free will (from (7′) and (8′)).

This re-modification is not without its problems. To start with (1′), let us suppose that the world is deterministic, and has a first moment of existence, and that P_F is a true maxi-specification of the intrinsic character of the universe at its first moment of existence. P_F won't follow (simply) from any true proposition that is a maxi-law. But neither will P_F follow from some true proposition that is a maxi-law, together with some true proposition that maxi-specifies the intrinsic character of the universe at some time (remote or otherwise) in the past. (That is, P_F won't follow from some true proposition that is a maxi-law, together with some true proposition maxi-specifying the intrinsic character of the universe at some time before the time at which P_F is true; *ex hypothesi* there is no such time).

Moving on to (2′), although this raises some controversial questions concerning the nature of species, it is at least arguable that it might have been that the universe was the way Aristotle thought it actually

was – i.e. that universe had an infinite past, in which human beings had always existed.

If it could have been that the universe was that way, then it is at most contingently true that no maxi-specification of the intrinsic character of the universe at some time in the (remote) past is a humanly touchable truth (since it could have been that, for any past time t, and any true proposition P_t that maxi-specifies the intrinsic character of the universe at t, there was something some human being could have done at some time t' prior to t that might have had the consequence that P_t was false).

A natural way to address both of the problems for the (re)modified argument just sketched would be to redraft the definition of touchability and untouchability, in such a way that, if P is a true proposition such that no human is or ever will be able to do anything that might result in the falsity of P, then P is at most "ex-touchable". Suppose we said:

> A true proposition is humanly untouchable (at a time) if and only if nothing any human is or ever will be able to do (from that time on) might have the consequence that it is false.

And suppose we also said that necessarily, no true proposition exclusively about the past and/or the present is humanly touchable. Then we could re-re-modify the 2008 version of the consequence argument to get something like this:

(1′′) Necessarily, if determinism is true, then at any (past, present, or future) time t, the following is true: if P is an arbitrarily chosen true proposition, there is a pair of propositions P' and L which satisfy the following conditions: (a) P' is a (true) proposition (simply) specifying the complete (intrinsic) state of the universe at some time no later than t, and L is a (true) proposition which is the conjunction into a single proposition of all the laws of nature, and (b) P' and L jointly imply P. In other words, necessarily, if determinism is true, then for any (past, present, or future) time t, any truth is jointly implied by a true "maxi-specification" of the intrinsic character of the universe at some time no later than t and a true "maxi-law" of nature.

(2′′) Necessarily, for any time t, no maxi-specification of the intrinsic character of the universe at a time no later than t is a humanly touchable truth (at t).

(3′′) Necessarily, no maxi-law of nature is (ever) a humanly touchable truth.

(4´´) Necessarily, if *P* is a humanly touchable truth (at *t*), then *P* does not follow from any truths all of which are (then) humanly untouchable (equivalently, from any truths none of which are (then) humanly touchable).

(5´´) Necessarily, for any time *t*, if *P* is a humanly touchable truth (at *t*), *P* does not follow from any pair of true propositions, one of which is a maxi-specification of the intrinsic character of the universe at a time no later than *t,* and one of which is a maxi-law of nature. (5´´) follows straightforwardly from (2´´) – (4´´).)

(6´´) But necessarily, if determinism is true, for any *t*, every true proposition follows from some pair of true propositions, one of which is a maxi-specification of the intrinsic character of the universe at a time no later than *t*, and one of which is a maxi-law of nature (see premiss (1´´)).

(7´´) So necessarily, if determinism is true, there are no humanly touchable truths (from (5´´) and (6")).

(8´´) Necessarily, if there are no humanly touchable truths, then there is no such thing as human free will.

(9´´) So necessarily, if determinism is true, then there is no such thing as human free will (from (7´´) and (8´´)).

Is this an argument for the incompatility of determinism with human free will that could be accepted by someone who thinks that a traditional God is a possible being, and that determinism is accordingly compatible with the laws of nature being divinely and absolutely touchable (and up to God)?

It seems not. For according to the definition of determinism presupposed in (1´´) (and the definition of determinism accepted by van Inwagen), necessarily, if determinism is true, then for any time *t*, the facts about the intrinsic character of the universe at any time *t´* no later than *t*, together with the maxi-law of nature *L*, fix all the facts. (As van Inwagen puts it: "[d]eterminism says that the past (the past at any given instant, a complete specification of the universe at any given instant in the past) and the laws of nature together determine everything, that they leave open no possibilities whatever".[7]) But it seems very doubtful that there is any possible world in which both (i) there is a traditional God, and (ii) for any time *t*, the facts about the intrinsic character of the universe at

7. *Ibidem*, p. 9.

any time no later than t, together with the maxi-law of nature L fix *all* the facts (which is to say, all the supernatural as well as all the natural facts). If there is such a world, then in it the facts about the intrinsic character of the universe at some time no later than t, together with the maxi-law of nature L, fix *all* the facts about God. But how could the facts about the intrinsic character of the universe at t', together with the maxi-law of nature, as van Inwagen puts it, "leave open no possibilities whatever" concerning how the God who existed in that possible world was, assuming that that God was a traditional God (a supernatural, transcendent being, outside nature and not subject to its laws)? If someone convinced me that the facts about the intrinsic character of the universe at some past time or at the present time, together with the maxi-law of nature L fixed *all* the facts, I would on that basis conclude forthwith that there was no (traditional) God.

So it looks as though, for anyone who wants to leave room for compatibility of determinism with the divine touchability of the laws of nature, the definition of determinism presupposed by (1'') is too strong. We could weaken that definition, and end up with something like:

> For any time t, the facts about the intrinsic character of the universe at any time t' no later than t, together with the maxi-law of nature L, fix all the facts about the intrinsic character of the universe at any time whatever.

Incidentally, on this understanding of determinism, as on van Inwagen's understanding, in a deterministic universe, the intrinsic character of the universe in the recent past and the maxi-law of nature jointly determine/imply the intrinsic character of the universe in the remote past, in exactly the same way that the intrinsic character of the universe in the recent past and the maxi-law of nature jointly determine/imply the intrinsic character of the universe now and in the future. If we want to avoid this consequence (because we (not unnaturally) think of determinism as a thesis about how the future depends on the past) we can say that determinism says something like:

> For any time t, and any initial bit of the history of the universe whose last moment is t (where a bit of history might be as short as a mathematical instant, but might also be an infinitely long period of time) the facts about the intrinsic character of the universe throughout that bit of history and the maxi-law of nature jointly determine/imply the facts about the intrinsic character of the universe throughout the rest of history.

On either of the last two ways of understanding determinism, it is a thesis to the effect that certain facts about the (complete) intrinsic state the universe was or is in, together with the laws of nature, fix all the facts about the (complete) intrinsic states of the universe ever was or is or ever will be in. Both ways of understanding determinism are compatible with the supposition that even all the facts about how the universe is intrinsically throughout history, together with maxi-law of nature L, do not fix (all) the supernatural facts (all the facts about what supernatural beings there are, and what properties they are).

Suppose we modify (1´´), so that it presupposes something along the lines of one of the last two construals of determinism just sketched. Have we at last found an argument that for the incompatibility of determinism with human free will that leaves room for the idea that a traditional God is possible, and determinism is accordingly compatible with the laws of nature being divinely and absolutely touchable (and up to God)?

I don't think so. Suppose that *L* is the maxi-law of nature in the actual world—a maxi-law that includes the law that the gravitational force between any two bodies with masses m_1 and m_2 is (always) equal to Gm_1m_2/r^2, the law that bodies only accelerate when subject to a net force, and so on. Consider a possible world *w* in which *L* is true, and a maxi-law of nature, and in which there is a (traditional) God. Suppose further that in *w* someone petitions God to make it the case that tomorrow, for a particular pair of bodies b^*_1 and b^*_2 with masses m^*_1 and m^*_2, the gravitational force between b^*_1 and b^*_2 will be a bit less than (or a bit greater than) $Gm^*_1m^*_2/r^2$. In *w*, God does not accede to the petitioner's request (for His doing so would imply that the law of universal gravitation is false in *w*, and hence that *L* is false in *w*, and *ex hypothesi L* is true in *w*). Nevertheless, in *w*, God has the *ability* to accede to the petitioner's request. So in *w*, there is something that God is able to do, in responding to the petitioner's request, that would and *a fortiori* might result in the falsity of *L*. In which case, in *w* there is something the petitioner does, and *a fortiori* is able to do, which might result in the falsity of L. So in *w,* there is a law of nature (to wit, L) that is not only divinely but also humanly touchable; in which case premiss (3´´) of our latest modification of the 2008 consequence argument is false.

To be sure, in the scenario described, nothing the petitioner does *guarantees* the falsity of *L*; with respect to the falsity of *L*, (the petitioning) man (or woman) proposes, and God disposes. But van Inwagen is quite clear that, in order for a proposition to be humanly "touchable", it's not necessary that a human being be able to guarantee its falsity; it's enough if the human being is able to do something that *might* have the falsity of that

proposition as a consequence.[8] And the petitioner does, and so *a fortiori* is able to do something that might have the falsity of *L* as a consequence.

Naturally, the argument just set out depends on the assumption that there is a possible world *w* in which some law of nature is divinely touchable, and someone could block the argument by denying the assumption. But I don't think that someone who accepts that it's metaphysically possible that there is a (traditional) God, on whose choices the truth of propositions such as *L* depend, is in a good position to deny that assumption. This is why I don't think that the latest modification of the consequence argument is an argument that for the incompatibility of determinism with human free will that leaves room for the idea that a traditional God is possible, and determinism is accordingly compatible with the laws of nature being divinely and absolutely touchable (and up to God).

(Incidentally, if there is in fact a traditional God, of a sort who might accede to a petitioner's request make it the case that, for a particular pair of objects b^*_1 and b^*_2, the gravitational force between b^*_1 and b^*_2 will be a bit less than, or a bit greater than $Gm^*_1m^*_2/r^2$, then the law of universal gravitation and *L* are not only possibly but actually humanly "touchable", and not just (3´´) but also its "de-necessitation" will be false).

One might draw from these considerations the following moral:

> (Unlike the thesis that every truth is humanly untouchable) determinism is simply too weak a thesis to be incompatible with the existence of human free will. What *is* incompatible with human free will is (roughly) determinism *plus* the human untouchability of the intrinsic character of the universe at any non-future time *plus* the human untouchability of the laws of nature. (If, as seems at least initially plausible, it is a necessary truth that the intrinsic character of the universe at any non-future time is humanly untouchable, we can say that what is incompatible with human free will is determinism *plus* the untouchability of the laws of nature.)

But that's not the moral I would want to draw. I am in fact sympathetic to van Inwagen's view that determinism by itself is incompatible with the existence of human free will, and inclined to think that the modal-theological considerations adduced above don't ultimately tell against it. In what follows, I shall try to explain why.

8. *Cf.*, *ibidem*, p. 5.

Once upon a time, determinism was typically defined in terms of causation (e.g. as the thesis that all events have causes, or – less implausibly – as the thesis that all events have what Aquinas would call "indefectible" and David Lewis would call "non-chancy" causes). Nowadays, it is typically understood as a thesis about (logical) implication – e.g. as the thesis that the facts about the intrinsic character of the universe throughout any initial stretch of its history, together with the facts about the laws of nature, (logically) imply the facts about the intrinsic character of the universe throughout the rest of history.

Prescinding from details about exactly which thesis, it is at least initially plausible that determinism can be understood as a thesis about the (logical) implications of maxi-specifications of intrinsic states of the universe and maxi-laws. So, prescinding from details about exactly which thesis, it is at least initially plausible that the truth of some thesis about the (logical) implications of maxi-specifications of intrinsic states of the universe and maxi-laws is sufficient for the truth of determinism. We can see this from the following conversation:

A: What do *you* think – is determinism true?

B: Personally, I think Laplace got it right: given complete knowledge of the intrinsic character of the universe at an arbitrarily chosen time, and complete knowledge of the laws of nature, a logically omniscient being would have complete knowledge of the intrinsic character of the universe at any time.

A: I don't follow. Suppose Laplace was right; why should that mean that determinism is true?

A's response to B strikes us as surprising, because we take it as a safe bet that if, as Laplace thought, a logically omniscient being would be able to deduce all the (complete) intrinsic states the universe ever was or is or will be in from any one such state, together with the laws of nature, then determinism is true.

We also think that it is at least not obviously (metaphysically) impossible that a proposition is both a law of nature, and divinely touchable. (Stories in which there are laws of nature that God is able to make false do not have the same effect on us as stories in which God is able to make a round square, or stories in which God is able to change the past.) Moreover, if we reflect, we will judge that if it is not obviously (metaphysically) impossible that a proposition is both a law of nature, and divinely touchable, then, it is not obviously (metaphysically) impossible

that a proposition is both a law of nature and humanly touchable. (Again, stories in which the proposition that the gravitational force between bodies is equal to m_1m_2/r^2 is both a law of nature, and such that something a petitioner is able to do might result in its falsity, do not have the same effect on us as stories in which God is able to make a round square, or stories in which God is able to change the past.)

Putting all these considerations together, we seem to arrive at the conclusion that it is at least not obviously (metaphysically) impossible that determinism is true (inasmuch as (say), there is a pair of true propositions P_0 and L, such that P_0 maxi-specifies the intrinsic character of the universe at its first moment of existence, L is a maxi-law of nature, and P_0 and L jointly fix the intrinsic character of the universe at every time), even though some laws of nature and some truths are humanly as well as divinely and absolutely touchable (inasmuch as there is something a petitioning creature is able to do that might result in the falsity of a law of nature). And if it's (metaphysically) possible that determinism is true, even though some laws of nature and some truths are humanly touchable, then neither the 2008 version of the consequence argument, nor the modifications thereof considered in this paper establish the incompatibility of determinism with human freedom.

All this seems plausible enough, and yet… Consider a possible world in which (a) up to now, the gravitational force between any two bodies with masses m_1 and m_2 has (always) been equal to Gm_1m_2/r^2, (b) someone has just petitioned God to make it the case that tomorrow, for a particular pair of bodies b^*_1 and b^*_2 with masses m^*_1 and m^*_2 the gravitational force between m^*_1 and m^*_2 will be a bit less than (or a bit greater than) $Gm^*_1m^*_2/r^2$, and (c) God has the ability to do something (in response to that petition) that will result in its no longer being true, as of tomorrow, that the gravitational force between any two bodies with masses m_1 and m_2 has always been equal to Gm_1m_2/r^2, and God has the ability to do something (in response to the petition) that will result in its still being true, as of tomorrow, that the gravitational force between any two bodies with masses m_1 and m_2 has always been equal to Gm_1m_2/r^2. That seems to show that that in the possible world just described, the universe is not deterministic. If God (*ut nunc*) has the ability to respond to the petition in both of the ways just described, then God (*ut nunc)* has the possibility of responding to the petition in both those ways. (As Quine might have said, "no ability without possibility".) If God (*ut nunc*) has the possibility of responding to the petition in both those ways, then the universe (*ut nunc)* has the possibility of being in either of two (complete) intrinsic states tomorrow (of having either of two intrinsic characters tomorrow).

And if it's genuinely still possible/possible right now that the universe will have either of two intrinsic characters tomorrow, then it seems that the universe is not in fact deterministic: a universe that really could still end up in a number of different (complete) intrinsic states tomorrow is *eo ipso* not a deterministic universe. It may be that there is only one (complete) intrinsic state the universe could still end up in tomorrow, *given the law of universal gravitation and the other laws included in* L_w (the maxi law of nature in *w*), just as it may be that there is only one (complete) intrinsic state the universe could end up in tomorrow, *given the (complete) truth about how things will go tomorrow*. Be that as it may, as long as the universe really could end up in different (complete) intrinsic states tomorrow, then (we – or at least I – want to say), the universe is not deterministic.

The intuition here is that (necessarily), if the universe is deterministic. there is never openness about its future (intrinsic) states (i.e., that at least as far as the future intrinsic states of the universe are concerned, there is always only one way that it is still possible for things to go). Can we reconcile this intuition with the idea that the truth of the right sort of maxi-law and maxi-specification involving implication thesis is sufficient for the truth of determinism? Can we reconcile it with, say, the idea that necessarily, if the facts about the intrinsic character of the universe throughout any initial stretch of its history, together with the facts about the laws of nature, (logically) imply the facts about the intrinsic character of the universe throughout the rest of history, then the universe is deterministic?

It depends on what else we think. Suppose we think that the laws of nature are propositions such as *only bodies subject to a net force accelerate*, or *bodies are never accelerated to superluminal speeds*. And suppose we think that *only bodies subject to a net force accelerate* is logically weaker than *it is inevitable that only bodies subject to a net force accelerate* – and that, more generally, laws of nature are weaker than their "inevitabilizations". On that way of thinking about laws of nature, assuming that determinism precludes openness (i.e. that necessarily, if the universe is deterministic, there is no openness about its future (intrinsic) states), maxi-law and maxi-specification involving implication theses will be too weak to guarantee the truth of determinism, because they will be too weak to preclude the kind of openness that determinism precludes.

Suppose on the other hand we have an (admittedly not initially intuitive) necessitarian view of lawhood.[9] That is, suppose we think

9. See Edgington, Dorothy – "Two Kinds of Possbility", *Aristotelian Society Supplementary Volume*, 78 (1), 2004, pp. 1-22.

that (as a matter of (metaphysical) necessity), laws of nature are (metaphysically) necessarily true. On this way of thinking about laws of nature, since whatever is metaphysically necessary is (permanently) inevitable, then – at least as long as we think the fixity of the past is necessary – there is no inconsistency in maintaining both that truth of the right sort of maxi-law and maxi-specification involving implication thesis is a sufficient condition for the truth of determinism, and that the fixity of all future intrinsic states of the universe is a necessary condition for the truth of determinism.

For our purposes, the crucial point is this: our worry about the Mark IV modification of the 2008 formulation of the consequence argument was that, at least for all we know, there are possible worlds in which some propositions are both laws of nature and humanly as well as divinely and absolutely touchable, in which case we cannot show that determinism implies the non-existence of human free will by appealing (*inter alia*) to the premiss that necessarily, laws of nature are not humanly touchable.

Notice, though, that in our (at least arguably) possible world in which the proposition that $F = Gm_1m_2/r^2$ is both a law of nature and humanly as well as divinely and absolutely touchable, at the time the petitioner makes her request, the future intrinsic states of the universe are not fixed: depending on how God responds to the petitioner, the universe could end up in either of two different (complete) intrinsic states tomorrow. So, for the reasons sketched above, I want to say that even if we assume that in our arguably possible world, there are two true propositions P_0 and L, such that (i) P_0 specifies the (complete) intrinsic state of the universe at its first moment of existence, and L is the maxi-law of nature, and (ii) P_0 and L jointly fix the intrinsic character of the universe at any every time, we cannot on that basis conclude that there is a possible world in which determinism is true, but some truths are humanly as well as divinely and absolutely possible.

So, I am inclined to think, when we are regard it as a truism that

> if, as Laplace supposed, the whole truth about all the intrinsic states that the universe ever was or ever will be in can be deduced from the whole truth about the intrinsic states the universe is in at one moment together the whole truth about the laws, then determinism is true,

we are conceiving of lawhood in a certain way—a way on which it implies inevitability. On the other hand, when we regard it as at least arguably possible

that a proposition could be at once a law of nature and humanly touchable (as long as it was divinely as well as humanly touchable), we

are conceiving of lawhood in a different way – a way on which it does not imply inevitability, and on which the usual sorts of maxi-specification and maxi-law involving implication theses do not imply determinism. I do not want to pronounce on which is the "right" way of conceiving of lawhood – if indeed there is a single right way (perhaps the concept of a law is not determinate enough for there to be a single right way of understanding lawhood). But I want to suggest that the idea that the modal-theological considerations discussed in this paper show that (at least for all we know) there are deterministic worlds in which there are humanly touchable truths depends on a failure to clearly distinguish these two different ways of conceiving of lawhood.

I have argued that, *pace* van Inwagen, the 2008 version of the consequence argument is not (as he formulates it) an argument for the incompatibility of determinism with free will, or even human free will, and that there is no straightforward way of turning it into a cogent argument for the incompatibility of determinism with either free will or human free will. I will wrap up this piece by suggesting that, on the assumption that determinism precludes openness, there is a streamlined and straightforward argument for the incompatibility of determinism with free will (and *a fortiori* human free will). The gist of that argument is:

(1*) Necessarily, if determinism is true, then at no (past, present, or future) time is there more than one (still) possible future (more than one way the future could (still) go).

(2*) Necessarily, if at no (past, present, or future) time is there more than one (still) possible future, then no proposition ever was or is or ever will be open (i.e., true in some (then) possible future, and false in some (then) possible future).

(3*) But necessarily, if it's not open whether *P* (at a time), then no one has a choice about whether *P* (at that time): I cannot (still) have a choice about whether *P*, unless it (still) might or might not be that *P*, depending on which of the things I (still) might do, I in fact end up doing.

(4*) So necessarily, if no proposition ever was or is or ever will be open, then nobody ever has had or has or ever will have a choice about anything.

(5*) And necessarily, if nobody ever has had or has or ever will have a choice about anything, then (in van Inwagen's words), "free will simply does not exist".

(6*) So necessarily, if determinism is true, free will does not exist.

In the modified version of the 2008 consequence argument, we move from the supposition that determinism is true to the (permanent) nonexistence of (humanly) touchable truths via ancillary premisses about the (permanent) non-(human)-touchability of the past and present, and the (permanent) non-(human)-touchability of the laws of nature; we then move from the (permanent) nonexistence of (humanly) touchable truths to the (permanent) nonexistence of (human) free will., via the assumption that (human) free will presupposes the existence of (humanly) touchable truths. In the streamlined argument, we move from the supposition that determinism is true to the (permanent) nonexistence of open propositions; and we move from the (permanent) non-existence of open propositions to the (permanent) non-existence of free will, via the ancillary premiss that free will presupposes openness.

To my mind, the argument just sketched has a number of virtues over and above its straightforwardness. First, its premisses are all at least initially plausible. Second, it appears not to require any controversial assumptions about the laws of nature (since it leave laws of nature out of the argument).

Third, it doesn't depend on any assumptions about the limitations of agents that might not hold for (supernatural) agents.[10]So, unlike the various modifications of the 2008 consequence argument discussed above, the "lawless" argument does not leave open the possibility that determinism is incompatible with *human* free will, or the free will of "natural" agents, rather than free will as such. I take this to be a good thing, inasmuch as – intuitively – determinism is no less a threat to angelic or divine freedom, than it is to human freedom. If I have not misunderstood him, van Inwagen is inclined to agree.[11] (see van Inwagen, (1998), pp. 371-72).[12]

10. Naturally, If there is a traditional God – a God for whom "all things are possible", including different continuations of the history of the world up to now – then determinism, as defined in the argument, is false: determinism so-defined and traditional theism are incompatible. But this doesn't mean that the argument at issue depends on any assumptions that might not hold for supernatural agents, since the argument at issue is an argument for incompatibilism, not determinism.

11. See van Inwagen, "The Mystery of Metaphysical Freedom". In: VAN INWAGEN, P. & ZIMMERMAN, D. – *Metaphysics: The Big Questions*, 2nd edition, Oxford: Blackwell, 2008 (e-accessible on <URL: http://www.andrewmbailey.com/pvi/>), pp. 371-72.

12. Thanks to Andrea Bottani, Mario De Caro, Michele Di Francesco, Tom Pink, and Peter van Inwagen.